WATERSHED WRAP

Quarterly Newsletter from the Coeur d'Alene Tribe's Fish & Wildlife Program describing watershed management efforts. Offering readers food for conversation and paper for wrapping!

Spring Equinox 2005 (Vol. 9 No. 1)

The Coeur d'Alene Tribal Fish, and Wildlife Programs work in a variety of cooperative, governmental and educational arenas in efforts to protect, enhance and restore our fish, and wildlife resources. This publication is intended to provide all people interested in Fish, and Wildlife of the Coeur d'Alene Reservation information about our program, and to solicit your support as well as constructive criticism. Thank you for your interest.

Respectfully,

Mark H. Stanger, Fish, and Wildlife Outreach Specialist

Spring Events Bulletin

Fisheries program is looking for volunteer services to help with these (k-12) up coming activities with small children & youth that will be participating. Call for times, dates & schedule.

- Earth Day Celebration at North Idaho College on Friday April 22. Talk about all the Ecology projects in Cd'A Basin area & tree planting.
- Mother Earth & Arbor Day observed April 25-29 The F& W program will Plant trees with local schools & community.
- Annual Observance of Water Awareness Week May 9-13 at Lake Creek. Interested schools sign–up, contact Mark H. Stanger.
- Natural Resource Camp at Chewelah, WA June 13-17 in cooperation with the Forest Service and other local Tribes. Age groups 15-19 Need student's applications turned in by Friday May 6, 2005.
- Fisheries Interns applicants for summer employment only one session 8 weeks 2-3 positions. Interested students call.

If you have any question regarding these events posted, call Mark 686-0131

Native American Fish & Wildlife Society Plans 23rd Annual Conference

By Karen Lynch, Technical Editor NAFWS

The Native American Fish & Wildlife Society (NAFWS) hosts its 23rd annual national conference in Choctaw, Mississippi on May 23-26, 2005.

The Southeast Region of the NAFWS and the Mississippi Band of Choctaw Indians will host this year's event. Conference activities will take place at the Pearl River Resort, http://www.pearlriverresort.com.

The conference theme this year is, "Partnerships: Discovering the New; Renewing the Old". As a side event in conjunction with the conference, the host tribe plans a hog hunt. The conservation law enforcement department of the Mississippi Band of Choctaw Indians will host this event and a turkey hunt will follow the hog hunt on Sunday, May 22.

As with most NAFWS national conferences, a tribal conservation officers shooting competition will be held as well as a trade show, field trips/tours, traditional feast, banquet/auction, and an awards luncheon. This year, the annual national business meeting takes place on the first day of the conference, a session for members of the NAFWS to bring forth issues, resolutions, and business concerns.

Workshops are planned in the areas of government-to-government relations, Tribal Land Incentive Program and Tribal Wildlife Grant programs, Hazardous Materials Awareness Training, APHIS programs, Chronic Wasting Disease workshops, and training for conservation law enforcement officers.

The conference planning committee hopes to receive papers from potential conference presenters, and to submit a paper, contact Teresa Harris at: harristeresa@yahoo.com or Terry Clark at TerryW.Clark@aphis.usda.gov, or Greg Tubby at (601) 553-4330. A tentative conference agenda and registration information may be obtained from the NAFWS website at: www.nafws.org or call: (303) 466-1725.

Update on the Hangman Creek Fisheries Restoration Project: Indian Creek will become the primary focus for the first year of restoration

By Bruce Kinkead, Fisheries Biologist

As the Coeur d'Alene Tribe's Fish and Wildlife programs complete our 3rd year of assessment work of the Hangman Creek watershed, it

becomes increasingly apparent that certain areas will be key to preserving what fish and wildlife habitat remains, as well as restoring those habitats that have become degraded beyond capacity to support certain species of fish and wildlife. Five areas of concern for trout habitat within the watershed include:

1) Indian Creek
2) Nehchen Creek
3) The upper mainstem of Hangman Creek east of the Reservation along the Sanders to Emida Road.
4) Martin and Conrad Creek (Tributaries of the South Fork of Hangman, east of the Reservation)
5) The section of Hangman Creek connecting Indian and Nehchen with the areas east of the Reservation.

There are other areas that may support healthy trout populations with more effort. These include streams that were once home to trout as recently as 1970 according to interviews with long time residents of the watershed. The severity of degradation, a patchwork of landownership, and their isolation from other fish-bearing areas upstream, make restoration problematic. These areas include:

1) Mission Creek
2) Sheep Creek
3) Mainstem of Hangman Creek from the confluence with Nehchen Creek to the confluence with Mission Creek just west of the towns of Tensed and DeSmet
4) Moctileme Creek
5) "Tensed" Creek, an unnamed stream that flows from the Little Butte area west of Moses down through the town of Tensed
6) SF Hangman and a tributary called Papoose that has gone dry in recent years

Often, biologists are faced with a dilemma of increasing habitat for one species, which may adversely affect another species. Old growth species like Goshawks and Spotted Owls require dense tracks of timber, whereas the Great Horned owl and Redtail hawk benefit from a more open landscape. Such an example could be argued for trout and elk. Fires such as those seen in Yellowstone National Park actually increased elk habitat, while such disturbances remove canopy over streams necessary to keep stream temperatures cold for trout. Indian Creek is a good example where trout and elk mutually benefit from current conditions.

The Indian Creek drainage is a valuable area to wildlife on the Coeur d'Alene Reservation due to its variety of habitat components. The dense over-story, high number of snags, and downed woody debris make it ideal for a variety of birds and small mammals. The heavy cover, year-round water source, and proximity to bluegrass fields and pastures make it an ideal area not only for big game winter range, but also for year-round big game habitat.

This quality of habitat is demonstrated in an elk telemetry study that is being conducted by the Coeur d'Alene Tribal Wildlife Program. The purpose of this project is to locate critical areas and movement patterns of elk on the Reservation. To date, 50% of the elk that are being studied in this project include the Indian Creek drainage in their home range, and 35% of the elk use this drainage as their core area. A core area is defined as an area that contains all of the habitat components that are vital for survival, and consequently where an individual animal spends the majority of its time.

The elk that use the Indian Creek drainage as their core area have utilized it year round; throughout calving season, summer, hunting season, and the winter. Clearly, the Indian Creek drainage contains a number of habitat components that are valuable to elk. If the vegetation in this area were altered significantly, it would also lead to a decrease in the amount of habitat for elk, as well as other wildlife species. Such a loss would be detrimental to the local elk herd, as well as the local wildlife community.

The aquatic resources of Indian Creek are even more unique. Of all the tributaries of Hangman Creek, Indian is the only one that flows year-round top to bottom. Many other streams do not have surface flow in the lower valley areas. There is flow data from 1994 that shows Indian Creek was actually dry, and there is word from one resident that the flow has increased over the years.

The fish in Indian Creek may turn out to be unique as well. Pacific coast trout such as Coastal rainbow (hatchery fish), Redband rainbow, and Cutthroat trout have been known to crossbreed. The Redband trout was profiled in the (Vol.7 No.2) edition of the Watershed Wrap. A genetics study was initiated in 2003-04 to answer many questions about migration patterns and hybridization between cutthroats and rainbows. Preliminary work done by the Washington Dept of Fish & Wildlife's Genetics lab indicate the fish in Indian Cr. are genetically unique from other rainbow trout found in the Coeur d'Alene- Spokane area. There is no evidence of cutthroat in their lineage, whereas fish in Nehchen Creek are genetically very similar to cutthroat trout found in the Pend Oreille area. There is no record of public or private stocking in Indian Creek, and a fish barrier in Sanders likely has isolated the population from mixing with cutthroat trout. This possible isolation from fish originating from outside of Indian Creek has allowed them to diverge into a unique stock of fish that have adapted to the local conditions, thereby increasing their chances of long term survival.

We greatly anticipate the final results of this genetics study.

There are other unique aquatic resources within Indian Creek. The Idaho Pacific salamander (profiled in the Vol. 7 No. 3 edition of the Watershed Wrap) is found in Upper Indian and N.F. Indian Creek. This salamander can grow as big as 18 inches at maturity. Indian Creek is the only area within Tribal boundaries where they are found. Tailed frogs are also found in Indian Creek along with other clean and cold streams. Both species of amphibians are an indicator of good health of an ecosystem, as they would be one of the first to disappear with a disturbance.

Indian Creek's unique aquatic and terrestrial wildlife resources, along with a minimum of landowners to bring together, make it the primary focus of restoration in the Hangman Creek watershed. Efforts will be made to sign landowner agreements to manage the watershed to protect the summer water flows and to decrease the fine sediments. Several things need to be accomplished in order for Indian Creek's fish population to survive and spread out into other portions of the watershed:

1) The riparian vegetation needs to be restored to it's natural state to prevent erosion and keep stream temperature low.
2) The large woody debris needs to be in a natural state in order to strike a balance between providing wood for pool formation and the tendency of wood to cause bank instability.
3) Replacement or modification of 3 fish blocking culverts that prevent fish from moving upstream in order to spawn.
4) Decreasing timber activities close to springs and riparian management zones
5) Increasing tree canopy from conifers such as Ponderosa Pine and Cedar, as well as on East Fork Indian Creek.

New Courses Offer Opportunity for Tribal Members to Develop Business, Budgeting Skills
By Laura Laumatia, EIRP Extension Educator

Starting your own business can be an intimidating process. Many people feel so overwhelmed by managing their own finances that they mistakenly believe they could never be successful entrepreneurs. That's why the Extension Indian Reservation Program (EIRP) and the Coeur d'Alene Tribal "Native Employment Works" program have partnered to develop a series of courses aimed at developing personal and business financial skills, as well as gardening skills. The ultimate aim of these courses is to encourage tribal members, especially Temporary Assistance to Needy Family (TANF) and General Assistance customers, to consider their local resources, talents and skills, as a means to self-sufficiency.

The first course, "Family Budgeting," is a six-week, 40-hour course that will lead students through a personal finance curriculum. Topics covered will range from "Savvy Shopping," to "Purchasing and Maintaining a Car." The course will take students into the field to hone their financial skills, and ensure that they are in control of their personal budgets.

The second course will be a crash-course in business basics using the nationally recognized NxLevel™ curriculum, "Business Plan Basics." The ten-week course is geared towards home-based and micro-entrepreneurs who may have never owned and managed a business. Participants learn everything from cash-flow to looking for financing, and spend the ten weeks completing a business plan.

The EIRP Extension Educator and the TANF Coordinator are also developing a gardening program that is expected to begin in late April. Students in the program will develop their planting skills through hands-on experiences in a community garden. The curriculum will emphasize both native foods and market produce. The fruits of their labor will be shared with the tribal community through the senior center, and participants will also have reaped another method of supplementing their food budget.

The first course started on March 3 at the TANF office. Participation still encouraged. Please contact the Coeur d'Alene EIRP Extension Educator, Laura Laumatia at 686-1716, or coordinator Jannette Taylor at 686-5621.

Windy Bay Property
By Gerald I. Green, Wildlife Program

An assessment of the current state and potential of the Windy Bay Property at the mouth of Lake Creek was completed in 2004. Included in the assessment was an evaluation of the property's ability to support 7 of the species that were selected as the Albeni Falls Target Species. Habitats for Canada goose, mallard duck, muskrat, white-tailed deer, yellow warbler, black-capped chickadee and bald eagle are confined to the floodplain wetlands along Lake Creek. While the extent of these wetlands is limited to 21.5 acres by the steep slopes on either side of Lake Creek, they function at close to optimum for the Albeni Falls Target Species. The assessment, however, points to a few issues that will need to be addressed in future management actions.

Weeds such as spotted knapweed; hawkweed, cheatgrass, and yellow star thistle were found on the higher portions of the slopes on either side of Lake Creek, particularly along roadbeds in that area. A plan to effectively deal with these weeds for the long term

will be incorporated into the development of the management plan.

The forests on the dry, steep slopes present a challenge in that they will be susceptible to fires. The forest overstory will be encouraged to develop into a mature old growth state, but strategies to manage the understory fuels to minimize the likelihood of uncontrolled fires must be defined and incorporated into the management plan.

Access to the property is limited since it is surrounded on all sides by private lands. However, access management for the property will be clearly defined in the management plan.

If you have any concerns or comments about the future management of the Windy Bay Property please feel free to contact Gerry Green at the Coeur d'Alene Tribal Wildlife Office at *208-686-0312*. Any comments received will be taken into consideration as the management plan is written.

Fish Habitat Surveying Results

By Stephanie Hallock, Fisheries Biologist

We are now into the third year of completing habitat surveys focusing on four tributaries to Lake Coeur d'Alene. Twenty-one habitat sites were surveyed in 2004. In completing these surveys, fisheries technicians have collected a variety of physical habitat data that will be used to monitor channel change and establish a link between habitat condition and fisheries status/response. Information that is collected at each site includes a 500 foot long streambed profile, cross-section measurements along the profile, pebble counts (which provide streambed sediment size distribution), the number and size of large wood present in the channel, and the contribution of vegetation in providing shade to the channel. This initial data set is helping us not only refine our study design for the future, but is also helping us to design current restoration projects. This coming summer we will continue to collect data at previously surveyed sites as well as newly identified ones.

What have we found? We have mostly found small channel changes, which is expected because the past several years have been relatively dry with no channel-changing flows like the 1997 floods. Any large changes in the streambed profile for our study sites have been mainly due to beaver activity or our restoration activities. Figure 1 shows one example of a streambed profile for a site in the Lake Creek drainage. We can see how the beaver dams have changed from 2003 and 2004 for this site. Beaver dams are important in creating and maintaining new habitat and this data illustrates the role beaver's play in dynamic ecosystems. Native westslope cutthroat fry were found in the deeper pools maintained by the beaver dams.

Another way to measure habitat quality is by collecting cross-section data, which tells us how the channel is changing over time. An example is displayed in Figure 2. From this we can tell if better habitat is being created as a result of this change or if the channel is becoming unstable and habitat quality is being reduced.

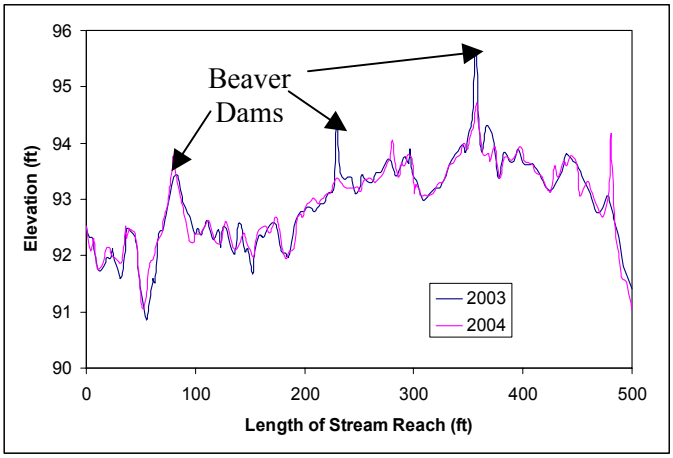


Figure 1: Streambed profile of Lake Creek site 8 for 2003 and 2004. The upstream end of the site is at Station 500.

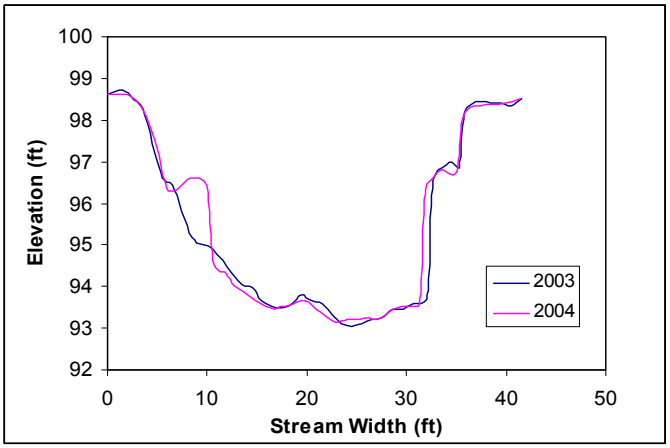


Figure 2: One cross-section profile of Lake Creek site 8. The profile is from left bank to right bank looking downstream.

NEW PHASE FOR THE 'EL-TUMISH PROJECT TO BEGIN THIS SUMMER

By Angelo Vitale, Fisheries Biologist

I have written several articles in past editions of the Watershed Wrap focusing on our restoration efforts on the old Johnson homestead in the Benewah Valley (see: Fall 2003 and Fall 2004). I would like to continue that series by describing our plans for the upcoming field season.

Over the last 80 years, Benewah Creek has responded to various management activities in the

watershed by incising and entrenching within its former floodplain surface. Although water can still access the floodplain, this now occurs on a less frequent basis. In our management of the property we are pursuing efforts that will promote long-term channel stability, optimize fish migration, improve instream habitat for native trout, increase wetland habitat and enhance subsistence opportunities within the 3.2-mile reach on the property.

In October 2004, we contracted with Inter-Fluve, Inc. out of Hood River, Oregon to provide a design to fill the existing channel with imported gravel so the creek will flood the valley bottom on a more frequent basis, and keep the valley bottom wetter for longer periods. Some of the goals for the design effort were to identify strategies to increase the hydro-periods for wetland plant species and increase the capacity for long-term water storage in the floodplain soils. By implementing these strategies we hope to increase base streamflows and increase the input of cold groundwater to the stream channel over longer time frames. We feel that reestablishing and enhancing the connection between the stream and the surrounding groundwater aquifer is a key component of improving trout habitat over the long term.

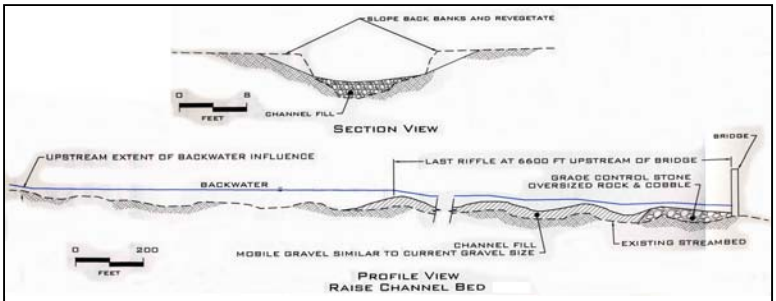
The resulting design takes the approach of filling the stream channel to historical elevations and utilizing historical channel alignments where possible. The designed planform creates channel grade and profiles within the range of what is believed to be historical conditions, based on topographic and field analysis.

There are three general design treatments. In areas where abandoned segments of channel will become reactivated to function as channel mainstem, the design condition is nearly restored to historical channel conditions. This is referred to as abandoned channel recovery. In other areas, channel segments have already eroded laterally and developed the appropriate hydraulic shape to accommodate frequent channel forming flows. Here the channel will generally be left within the current alignment but the bottom will be raised to near historical elevations, and the banks and floodplain will be modified to appropriate dimensions and grade. This treatment is referred to as new bank and floodplain creation. New bank and floodplain creation will allow recovery to take place within contact of the valley bottom. Existing channel segments that are filled is the third type of treatment and is referred to as existing channel fill. All treatments will allow future channel migration to occur.

To reduce project cost, the channel will be lifted by filling the channel at intervals along its length. These fill locations will occur at areas that would naturally be riffles. The pools between these riffles will not be filled and will remain unnaturally deep until existing basin sediment loads slowly fill them. Riffle materials are intended to be large enough to maintain grade but small enough to fall into void spaces as the channel laterally migrates over time.

Large wood material will be used throughout the project to increase lateral roughness where needed, create banks and maintain channel stability until wetland plant communities become fully established. Over time the wood will decay and be replaced by vegetation capable of growing within the wetter valley bottom.

The design encompasses the lower 8,800 feet of channel on the property. Due to the large scope of the project and the cost of implementation, we intend to construct the project over a period of several years. We hope to begin construction this summer and complete the first 1600 feet by the end of the field season. Spreading construction over several years will give us the advantages of reducing overall costs, improving the success of revegetation efforts following construction, monitoring incremental changes in fish and water quality/quantity in response to construction, and provide an opportunity to learn from our successes or failures.



General schematic for the channel fill design.


Stream channel restoration will begin at the lower end of the property this year and involve abandoned channel recovery, new bank and floodplain creation, and existing channel fill.

Native Culture Class Enhances Children's Understanding of Their Community

By Mark H. Stanger, Education & Outreach Specialist

The outreach specialist has been working with the 21st Century Community Learning Center (CCLC) Success Center at Lakeside Elementary in Worley, Idaho in the after school Tribal Culture class. This program provides academic assistance and exciting cultural opportunities including: Native American drumming, singing, dancing, drum making, leatherwork and beading. We are also partnering with the Benewah County Extension's 4-H program and they are providing us with classes on photography, cooking, leadership, as well as various other fun and enriching programs.

The Native Culture class focuses on the Native American's traditional values in respect to the use of animals. Thus far the children have learned about the significance of the eagle through stories and witnessing the literal taking apart of a bald eagle to be used for traditional purposes (i.e. feathers are used for regalia and ceremony). They have also learned of the importance of deer and elk though stories and the making of drums and medicine bags. They also had the opportunity to sample traditional foods such as deer, elk, moose, and buffalo as well as husk husk.

The children participating in the program have been very receptive to this cultural learning experience.